POLYMERIZATION PROCESS AND CONTROL OF POLYMER COMPOSITION PROPERTIES

ABSTRACT

Methods of controlling rheological properties of polymer compositions comprising at least one high molecular weight polymer and one low molecular weight polymer are disclosed. The polymer compositions are produced by polymerizing monomers in a single reactor using a bimetallic catalyst composition. A control agent such as, for example, an alcohol, ether, oxygen or amine is added to the reactor to control the rheological properties of the reactor. The polymerization takes place in the presence of rheological-altering compounds such as alkanes and aluminum alkyls. The control agents are added in an amount sufficient to counter the influences of the rheological-altering compounds.